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#### AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An ~~oxygen-delivery~~ oxygen delivery matrix, comprising: a biocompatible, single unit ~~construct~~ polymer network, wherein the matrix is ~~formed prior to gas production, comprising a swellable~~ absorbs liquid from a tissue environment, and wherein the oxygen delivery matrix has a higher oxygen tension than the oxygen tension found in a tissue environment.
2. (Original) The matrix of Claim 1, further comprising at least one active agent.
3. (Currently Amended) The matrix of Claim 1, wherein the biocompatible ~~matrix~~ single unit polymer network comprises polyacrylamide.
4. (Previously Presented) The matrix of Claim 1, wherein the oxygen delivery matrix further comprises a non-gellable polysaccharide.
5. (Canceled)
6. (Currently Amended) The matrix of Claim ~~371~~, wherein the ~~generation of oxygen~~ higher oxygen tension results from the decomposition of a peroxide.
7. (Canceled)
8. (Previously Presented) The matrix of Claim 1, wherein the catalyst is a carbonate salt, a salt of iodide, manganese dioxide, ~~or~~ cupric chloride, or an enzyme.

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9-11. (Canceled)

12. (Currently Amended) The matrix of Claim 1, wherein the swellable biocompatible single unit polymer network comprises a natural or synthetic polymer.

13-20. (Cancelled)

21. (Currently Amended) The matrix of Claim 2, wherein the at least one active agent comprises gases, anti-microbial agents, anti-fungal agents, anti-bacterial agents, anti-viral agents, anti-parasitic agents, mycoplasma treatments, growth factors, proteins, nucleic acids, angiogenic factors, anesthetics, mucopolysaccharides, metals, pharmaceuticals, chemotherapeutic agents, herbicides, growth inhibitors, anti-fungal agents, anti-bacterial agents, anti-viral agents, ~~and~~ anti-parasitic agents, wound healing agents, growth promoters, indicators of change in the environment, enzymes, nutrients, vitamins, minerals, carbohydrates, fats, fatty acids, nucleosides, nucleotides, amino acids, sera, antibodies and fragments thereof, lectins, immune stimulants, immune suppressors, coagulation factors, neurochemicals, cellular receptors, antigens, adjuvants, or radioactive materials.

22. (Previously Presented) The matrix of Claim 21, wherein the gases comprise nitrogen, carbon dioxide, and noble gases.

23. (Currently Amended) The matrix of Claim 21, wherein the ~~antimicrobial-anti-microbial~~ agents comprises isoniazid, ethambutol, pyrazinamide, streptomycin, clofazimine, rifabutin, fluoroquinolones, ofloxacin, sparfloxacin, rifampin, azithromycin, clarithromycin, dapson, tetracycline, erythromycin, ciprofloxacin, doxycycline, ampicillin, amphotericin B, ketoconazole, fluconazole, pyrimethamine, sulfadiazine, clindamycin, lincomycin, pentamidine, atovaquone, paromomycin, diclazaril, acyclovir,

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trifluorouridine, foscarnet, penicillin, gentamicin, ganciclovir, itraconazole, miconazole, Zn-pyrithione, silver salts, chloride, bromide, iodide, or periodate.

24. (Currently Amended) The matrix of Claim 21, wherein the growth factors~~agents~~ comprise basic fibroblast growth factor, acidic fibroblast growth factor, nerve growth factor, epidermal growth factor, insulin-like growth factors 1 and 2, platelet derived growth factor, tumor angiogenesis factor, vascular endothelial growth factor, corticotropin releasing factor, transforming growth factors  $\alpha$  and  $\beta$ , interleukin-8, granulocyte-macrophage colony stimulating factor, interleukins, or interferons.

25. (Previously Presented) The matrix of Claim 21, wherein the mucopolysaccharides comprise heparin, heparin sulfate, heparinoids, dermatin sulfate, pentosan polysulfate, chondroitin sulfate, hyaluronic acid, cellulose, agarose, chitin, dextran, carrageenan, linoleic acid, or allantoin.

26. (Previously Presented) The matrix of Claim 21, wherein the proteins comprise collagen, cross-linked collagen, fibronectin, laminin, elastin, or cross-linked elastin.

27. (Previously Presented) The matrix of Claim 21, wherein the metals comprise zinc or silver.

28. (Previously Presented) The matrix of Claim 1, wherein the matrix comprises a stranded configuration.

29. (Currently Amended) The matrix of Claim 27, wherein the biocompatible single unit polymer network comprises a natural or synthetic polymer.

30. (Currently Amended) The matrix of Claim 2, wherein the biocompatible single unit polymer network comprises collagen, gelatin, chondritin, calmodulin, cellulose, agar,

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agarose, animal hide, hyaluronic acid, dextran, alginate, polylysine, resorbable polymers, polyacrylamide, polymethacrylate, polyacrylate, polybuterate, polyurethane foam, polyether, silastic, silicone elastomer, rubber, nylon, vinyl, or cross-linked dextran.

31. (Currently Amended) The matrix of Claim 1, further comprising a water loss control agent comprising petrolatum, glycolipids, ceramides, free fatty acids, cholesterol, triglycerides, sterylesters, cholesteryl sulfate, linoleic ethyl ester, or silicone oil.

32. (Currently Amended) The matrix of Claim 1, further comprising a plasticizer comprising glycerol, water, propylene glycol, or butanol.

33. (Previously Presented) The matrix of Claim 1, further comprising a hydration control agent comprising isopropyl alcohol, ethanol, glycerol, butanol, or propylene glycol.

34. (Previously Presented) The matrix of Claim 4, wherein the non-gellable polysaccharide is guar gum.

35. (Previously Presented) The matrix of Claim 8, wherein the enzyme is catalase.

36. (Currently Amended) The matrix of Claim 1, wherein the biocompatible single unit polymer network comprises collagen, gelatin, chondritin, calmodulin, cellulose, agar, agarose, animal hide, hyaluronic acid, dextran, alginate, polylysine, resorbable polymers, polyacrylamide, polymethacrylate, polyacrylate, polybuterate, polyurethane foam, polyether, silastic, silicone elastomer, rubber, nylon, vinyl, or cross-linked dextran.

37. (Canceled)

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38. (Currently Amended) A gas delivery device, comprising a biocompatible, single unit ~~constructed of a formed matrix~~, wherein the ~~formed biocompatible single unit matrix~~ comprises a swollable polymer network and a gas oxygen, wherein the ~~gas is the result of a single reaction of a catalyst present in the formed matrix and a reactant solution the~~ biocompatible single unit matrix has a higher oxygen tension than the oxygen tension found in a tissue environment, and wherein the gas delivery device absorbs liquid from a tissue environment.

39. (Canceled)